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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/010,822	01/22/1998	GREGORY D. KNOWLTON	3756-399	9133

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EXAMINER

MILLER, EDWARD A

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/010,822

Applicant(s)

KNOWLTON ET AL.

Examiner

Edward A. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/19/00, 6/26/00, 11/2/00, and 5/01/02.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 4-32 is/are pending in the application.
- 4a) Of the above claim(s) 2, 4-12 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 13-18 and 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. This is to supplement Paper No. 13, including providing reasons why the arguments and declaration are not persuasive. Some merit has been found to elucidate reasons why the prior action was substantially repeated, notwithstanding applicants' alleged claim limitations and the declaration. Additionally, further search involving additional members of the Markush groups was done in an effort on the part of the Office to advance prosecution. It is up to applicants in the first instance to cooperate to advance the progress of the application, as detailed herein below.
3. The declaration submitted by co-applicant Ludwig is not persuasive. In the first place, it is replete with conclusions of patent law, without any stated basis of patent law expertise. This is distinct from the science opinions. But mere opinion without more, that is factual results, is entitled to little weight, especially when the opinion is on patent law as opposed to scientific questions. Note the MPEP, section 716 and indented parts on such declarations, including particularly 716.01(c), with citations of, e.g., *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984) ("It is well settled that unexpected results must be established by factual evidence," *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992) (declarations of seven persons skilled in the art offering opinion evidence praising the merits of the claimed invention were found to have little value because of a lack of factual support), and *Ex parte George*, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991) (conclusory statements that results were "unexpected," unsupported by objective factual evidence, were considered but were not found to be of substantial evidentiary value.)

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incorrect understanding of what the claims include, which further taints the probative value of the declaration. The declaration is also noted as lacking any appreciation of inherency law. If a taught composition is not stated to have a certain use, this does not mean that it is not inherently capable of such use. In this situation, the burden is on applicants to show by facts that this is not true to support a contrary opinion, as opposed to a mere opinion, especially when the claims read on the prior art as far as any concrete limitation is set forth.

4. Claims 1, 13-18 and 25-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite and cannot be understood.

Plainly, amended claim 1, for example, does state "consisting essentially of" in lines 3-4, and that what the invention is "consisting essentially of" is a mixture of 1) oxidizer, and 2) fuel, in simple terms. That's all there is to the invention, in a broad sense. Yet, the very next several lines define the scope of the oxidizer as "comprising". Further, dependent claims thereafter also recite a scope of "comprising", including claims 13, 14 and particularly amended claim 25, which depends on claim 1 and which claim 25 has a scope of "comprising" for both the metal fuel (molybdenum) and for the oxidizer composition. It is partly for this reason that the examiner did not previously vary the grounds of rejection, since it was so obvious to the examiner that the allegation of a narrower scope was plainly untrue. Where the scope is plainly so inconsistent, the claims are indefinite for failing to properly set forth the metes and bounds thereof. Further, per the MPEP, 2173 et seq on definiteness and indefiniteness, "during patent examination, the pending

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claims must be given the broadest reasonable interpretation consistent with the specification. *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Prater*, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969).” Thus, clearly and without doubt, the scope of the claims must be considered as being of the “comprising” variety. Compare *In re Janakirama-Rao*, 317 F.2d 951, 137 USPQ 893 (CCPA 1963), on the meaning of such scope terminology.

Near the end of claim 1, for example, are found limitations of “sufficiently intimately mixed” and “sufficient degree of contact.” Similar language is found in claim 26, for example. These terms in the claims are relative terms which render the claims indefinite. These terms are not defined by the claim, and the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. This is particularly since the relative nature or usage is not clear, and it is inconsistent with language ordinarily and previously used in the prior art. Thus, it is not clear what applicants’ intended meaning of “intimately mixed” is, or this is indefinite and incorrect when considered in light of the prior art. For example, as alleged in applicant’s declaration, paragraph 7 regarding Sammons which includes a binder, this term means that the presence of a binder is precluded, as this would preclude an intimate mixture suitable for an autoignition composition. This is plainly contradicted by prior art of record, including Scheffee et al., cited applicants. Scheffee et al. teach that solid propellant compositions as taught therein are suitable for autoignition use for [nonazide] gas generator compositions. Such compositions have a binder. Thus, there being no factual basis or support for this allegation in co-applicant’s declaration (and similar allegations elsewhere therein), and since it is contradicted by the prior art as set forth, this limitation or definition cannot be understood, or accepted as properly limiting the claims. This is also a further reason why the declaration is unacceptable, as factually incorrect or lacking proper factual basis for applicants’ opinions.

Further, in claims such as claim 1 and 26, the language regarding the content of the oxidizer composition is not clear. It is not clear what is positively required, and what is permissible. Further, in the claim 1 Markush group of a "component selected...", lines 7 et seq, e.g., it is not clear what is part of the Markush group and what is alternative to silver nitrate, e.g. Also, (possibly within the Markush group) language such as "a complex salt nitrate", "a dried", "hydrated nitrate" and such similar terms are indefinite and incomplete. It is not clear what is included. If these are intended as part of the Markush group, this is an improper Markush group, as such as to be listings of alternately usable substances, not of one or more vague genus which may also in turn overlap with other members of the group. Such cannot be understood. This is compounded by examples (including Ex. 4 on specification page 18 and 12 on page 21) in the specification apparently according to the invention, but which only include organic or chlorate oxidizers.

Additionally, the stoichiometric requirement, where present (e.g. claim 1, line 21, claim 18, line 3, and generally in claims 26-29) is indefinite. This is not stated with sufficient particularity with regard to what the stoichiometry is determined. For example, claim 1 refers to the metal and oxidizer, but claim 30 adds an organic amine which is not accounted for by the language. In claim 18, "the stoichiometric amount" also is indefinite, as it is not clear if this is likewise ignoring all components in the [perforce "comprising scope"] claims except for metal fuel and oxidizer. The claims, which contain such functional limitations apparently intended to limit the components of the composition, are also incompatible with the actual claim scope of "comprising", whether set forth per se in claim 26, or otherwise, as in claim 1. This rejection also incorporates by reference any part of Paper No. 13, paragraph number 4, which relates to indefiniteness or 112. 2<sup>nd</sup> paragraph, not specifically set forth herein. See also the next paragraph. If the ordinary artisan cannot reasonably know what the enabled invention is, how then are the metes and bounds of the claims clear?

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5. Claims 1, 13-18 and 25-32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to the questions above, regarding "sufficiently intimately mixed" and "sufficient degree of contact.", and such other questions where lack of adequate specification basis is apparent. These claims are rejected and the specification is objected to as lacking basis for these terms. Applicant has not pointed out basis in the original specification for such language, and such is not apparent. Applicant is required to point out the basis for such apparent new matter, or to cancel this terminology. The claims are also rejected as lacking sufficient description basis as to adequately teach how to practice the claimed invention. The possibilities are so great, but the exemplary support is so limited that it cannot be determined what the intended invention is, except for a few examples, other than an invitation to experiment. This is clearly inadequate. See, e.g., MPEP 2164.06. Here, examples are few, but the claims are so broad as to encompass millions of combinations. In this regard, even examples with silver nitrate have a major amount of silver nitrate, but the claims are unlimited as to any amounts of silver nitrate, or indeed, any ingredients. This is in part due to the broad "comprising" scope, but also to the general lack of definition regarding what the amounts and ingredients are. This is further shown by applicants' opinion criticisms of references applied (but without factual or experimental basis of inoperability or unsuitability) which references contain all that is concretely claimed, and with no specification examples supporting the arguments. It is also noted that applicants' specification itself suggests that the results in this area are unpredictable; for example see specification page 16, lines 26-32, where the composition is identical, but differing solely by the amount used result in varying autoignition

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behaviors. The specific (as opposed to descriptive) examples all include molybdenum, with but allegations for the other metals, e.g., see the last sentence of specification page 11, as well as page 13, lines 4-6. These are exemplary of how the specification does not reasonably enable the claimed invention. See, for example, *Ex parte Karol* (BdPatApp&Int) 8 USPQ2d 1771, where in a similar situation, applicant included overbroad claims that were essentially an "invitation to experiment." Thus, the specification does not reasonably enable one of ordinary skill to practice the invention as broadly claimed, lacking amounts, ratios, etc., to obtain the desired performance claimed.

6. In the following art rejections, the claims are read as being of broad "comprising scope", as set forth above. Otherwise, they are also considered in a broad manner. The arguments of applicants are not persuasive of error, in part since the claims are not reasonably definite. The references teach and suggest compositions which would appear to inherently autoignite at low temperatures. Mere allegations or attorney argument do not serve to overcome the rejections below.

Where the product appears to be the same or only slightly different, the properties recited would appear to be inherent. The Office does not have testing facilities to determine such. The burden falls on applicant to show that the prior art products do not necessarily or inherently possess the claimed properties. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966; *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596; *In re Best*, 562 F.2d 1252, 1255; 195 USPQ 430, 433-434; *In re Brown*, 459 F.2d 531, 173 USPQ 685.

As to the preamble argument, other cases hold to the contrary; this is a fact based determination. Here, the preamble is but an intended use on the one hand and an inherent capability on the other. Compare *In re Tuominen*, 213 USPQ 89 (CCPA 1982), where the preamble was found to be an intended use, not a structural limitation. This issue is tied up with the indefinite claim language; it is not proper for indefiniteness to define over prior art. There are no showings of



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any compositions not autoigniting. Indeed, autoignition is a well known "feature," inherent in all compositions in the art. See, e.g., Hillstrom, col. 1 for ammonium nitrate, and Scheffee et al.

As applicants, from informal telephone discussions with attorney, desire more complete consideration as well as patentability, what is required in the first instance is clear and definite claims, as well as a balance or correspondence between the teachings of the specification, on the one hand, and the claims on the other. Reasonable limits for the claims in view of the specification teachings, as opposed to guesses in this unpredictable art would be beneficial. This case has been exceptional due to the volume of issues from applicants' claim language and approach, e.g., the breadth thereof.

It has been held improper, indeed, reversible error, to rely on speculation as to the meaning of indefinite claims, and then reject that speculative meaning on prior art. *In re Steele*, 305 F.2d 858, 134 USPQ 292 [CCPA 1962], *Ex parte Brummer*, 12 USPQ2d 1653 at 1655 [USPTO BOPAI 1989]. Therefore, the art rejections are not intended as complete, but only to advance prosecution.

7. Claims 1, 13-18 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sammons et al., in view of Sidebottom, Garner et al., Healy and Ellern et al., for reasons set forth in Paragraph 2 of Paper No. 13, incorporated herein by reference.

8. Claims 1, 13-18 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halliday et al., in view of Tepper and Ellern et al., for reasons set forth in Paragraph 3 of Paper No. 13, incorporated herein by reference.

9. Claims 1, 13-18 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poole et al. '380, in view of Ferrando et al., Katzakian et al., Halliday et al., and Yabsley et al., for reasons set forth in Paragraph 5 of Paper No. 13, incorporated herein by reference.

10. Claims 1, 13-15 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halliday et al., for reasons set forth in para. 6 of Paper No. 13, incorporated herein by reference.

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11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 13-18 and 26-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 5,959,242.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of clear overlap.

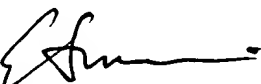
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In the newly cited references, the Chemical Abstracts are further to the science including the unpredictability of pyrotechnic reactions. The patents teach compositions with silver nitrate, as well as regarding low melting/low igniting compositions. These are supplemental to the teachings above and may be applied when the claims are amended to be reasonably understandable.

14. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em  
November 18, 2002

  
EDWARD A. MILLER  
PRIMARY EXAMINER